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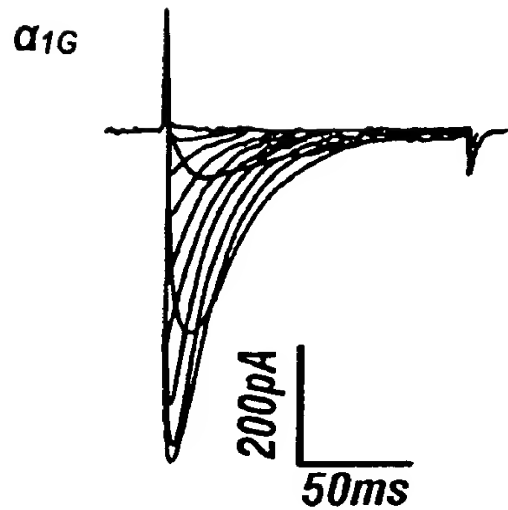


FIG. 1A

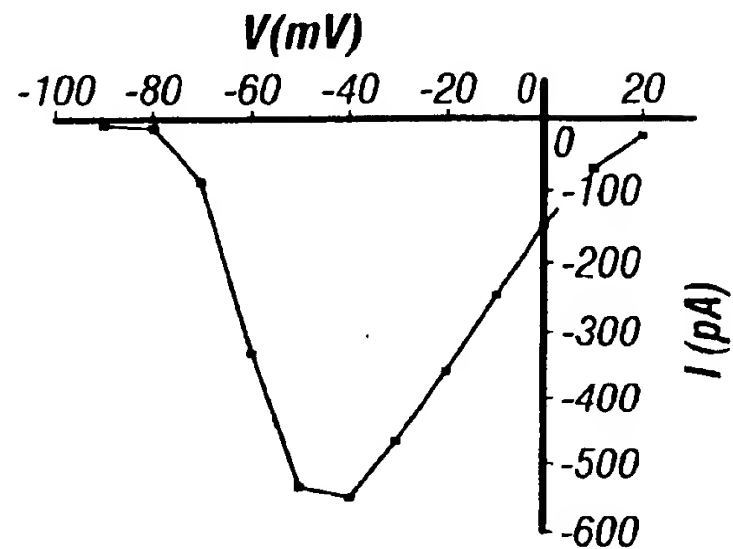


FIG. 1B

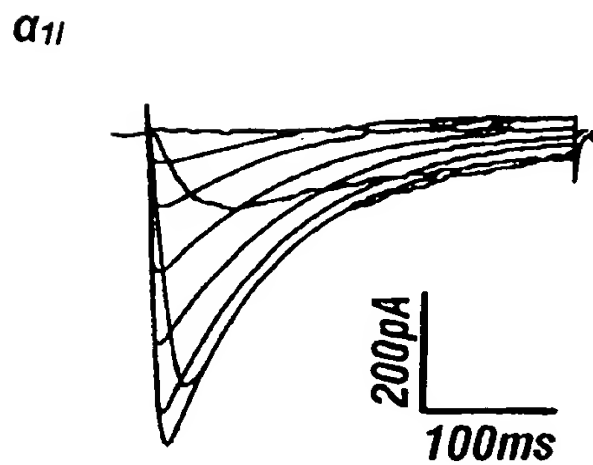


FIG. 2A

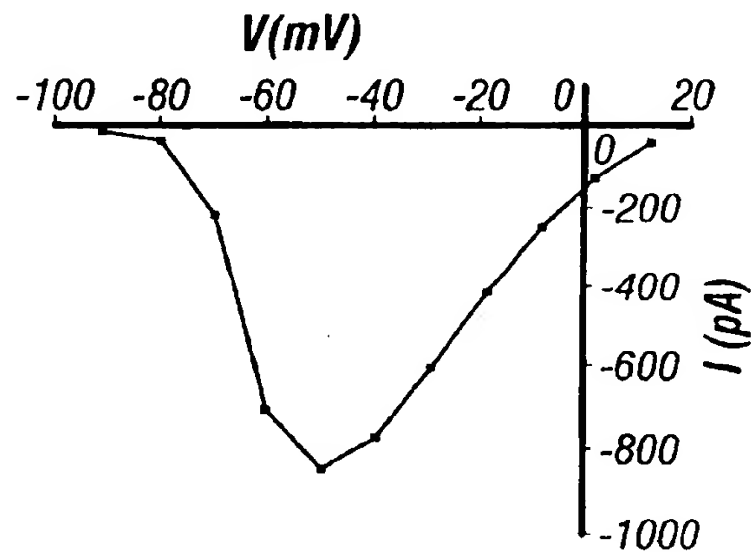


FIG. 2B

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Steady-state Inactivation

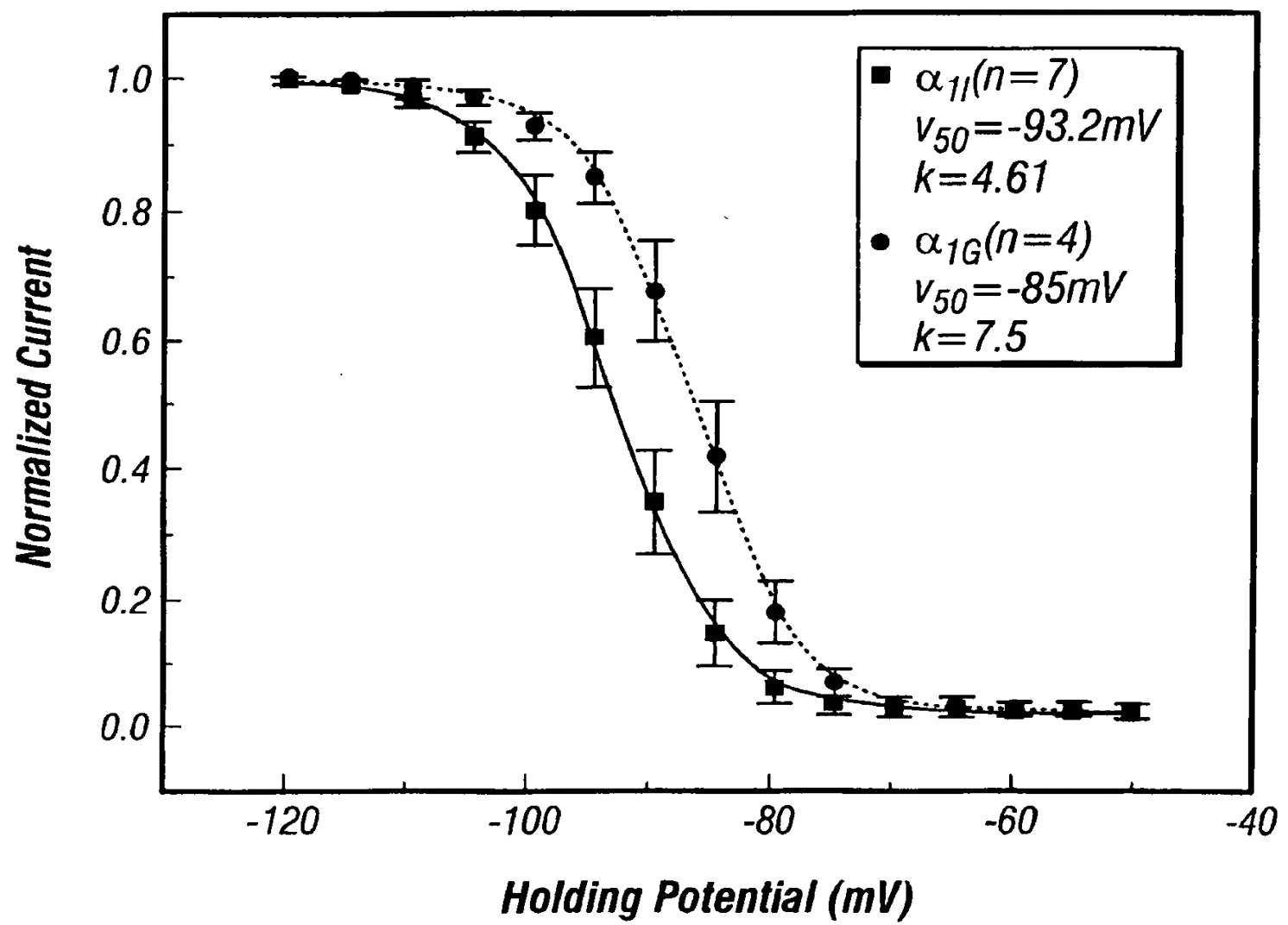


FIG. 3

Deactivation

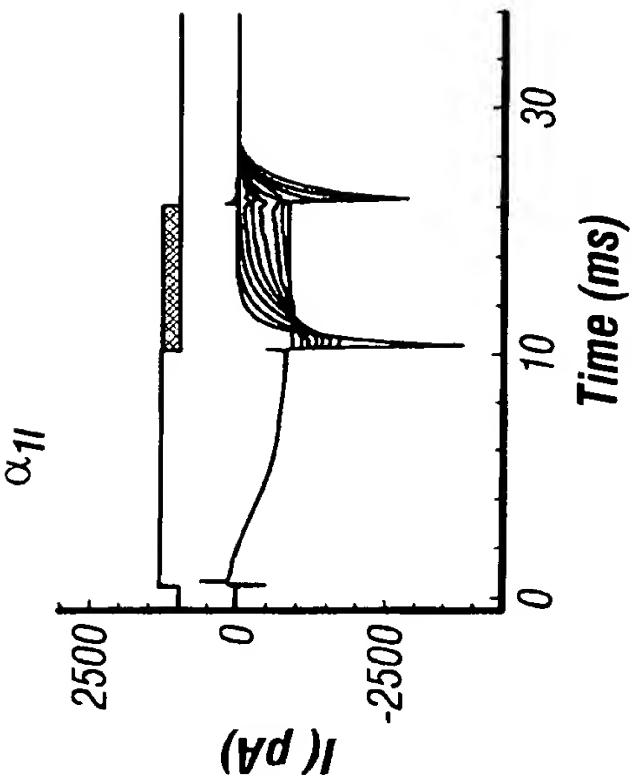


FIG. 4B

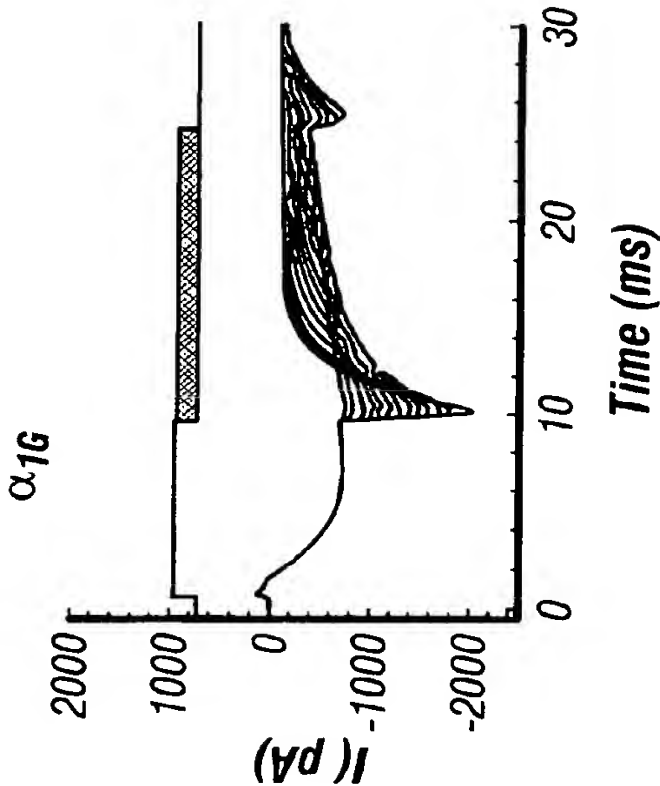


FIG. 4C

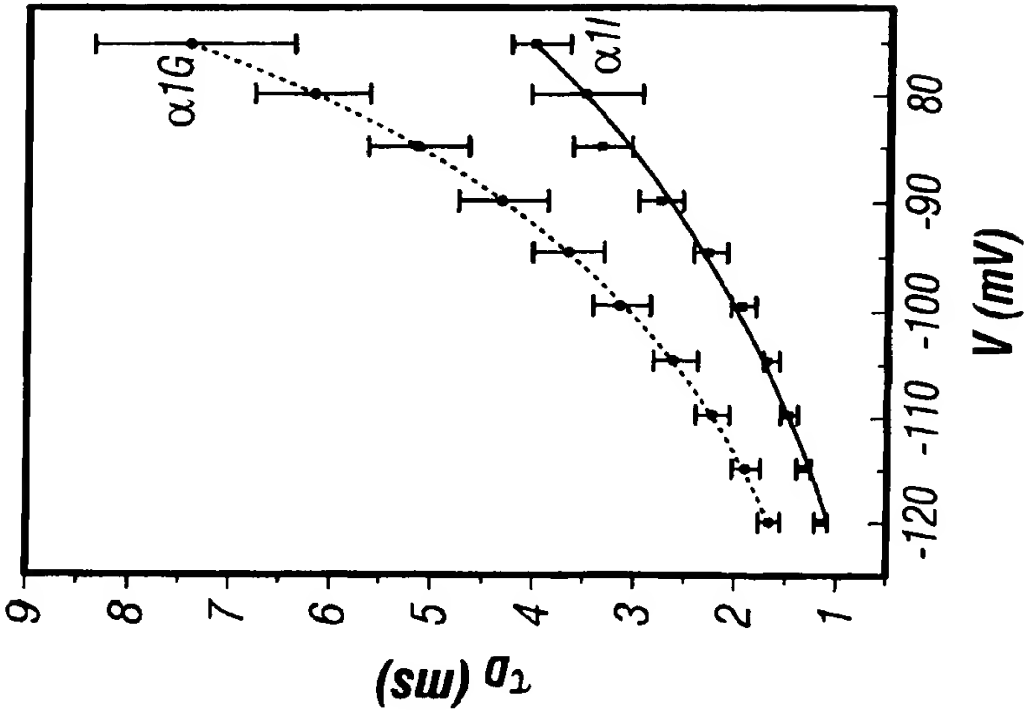
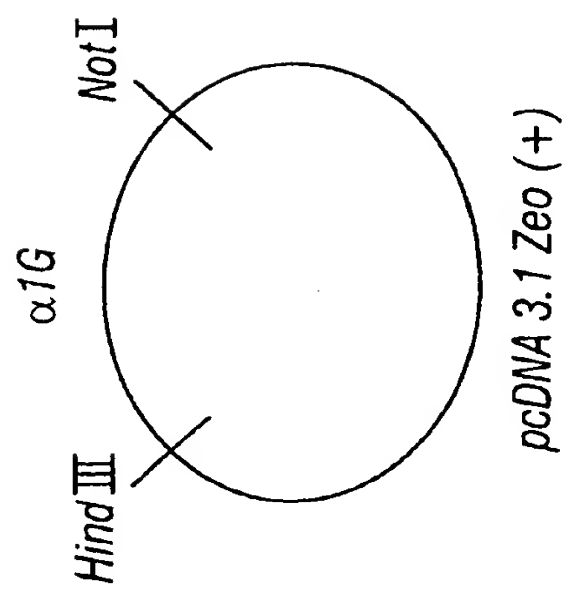
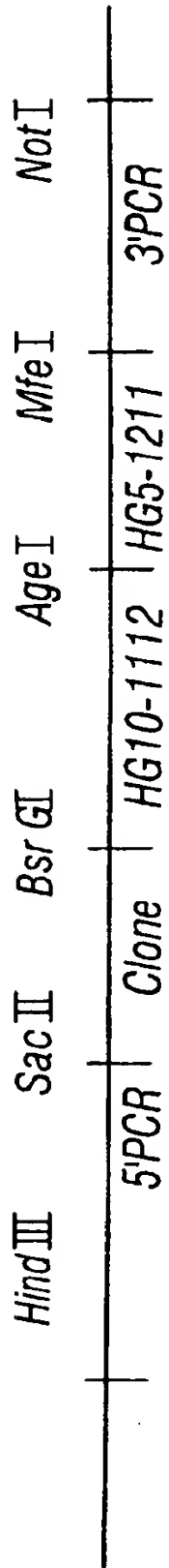
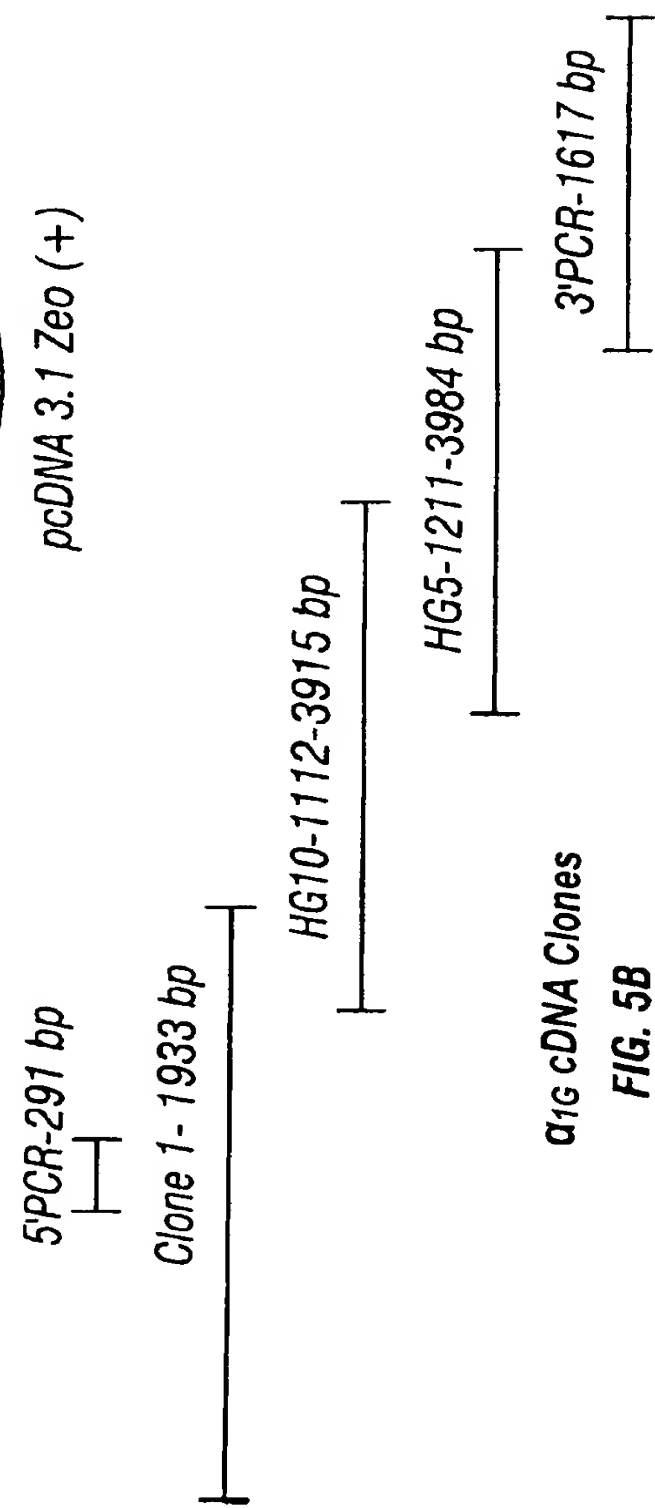


FIG. 4A



α_{1G} cDNA Construct
FIG. 5A



α_{1G} cDNA Clones
FIG. 5B

Human α_{1G} T-Type Calcium Channel cDNA

(SEQ ID NO:36)

1 aagcttgctgccccctcctcgatgccccgggccccggctggccagagg ATG GAC GAG GAG GAG GAT GGA 71
1 (SEQ ID NO:37) M D E E E D G 7
72 GCG GGC GCC GAG GAG TCG GGA CAG CCC CGG AGC TTC ATG CGG CTC AAC GAC CTG TCG GGG 131
8 A G A E E S G Q P R S F M R L N D L S G 27
132 GCC GGC GGC CCG CCG GGC GGC TCA GCA GAA AAG GAC CCG GGC AGC GCG GAC TCC GAG 191
28 A G G R P G P G S A E K D P G S A D S E 47
192 GCG GAG GGC CTG CCG TAC CCG GCG CTG GCC GTG GTT TTC TTC TAC TTG AGC CAG GAC 251
48 A E G L P Y P A L A P V V F F Y L S Q D 67
252 AGC CGC CCG CGG AGC TGG TGT CTC CGC ACG GTC TGT AAC CCC TGG TTT GAG CGC ATC AGC 311
68 S R P R S W C L R T V C N P W F E R I S 87
312 ATG TTG GTC ATC CTT CTC AAC TGC GTG ACC CTG GGC ATG TTC CGG CCA TGC GAG GAC ATC 371
88 M L V I L L N C V T L G M F R P C E D I 107
372 GCC TGT GAC TCC CAG CGC TGC CGG ATC CTG CAG GCC TTT GAT GAC TTC ATC TTT GCC TTC 431
108 A C D S Q R C R I L Q A F D F I F A F 127
432 TTT GCC GTG GAG ATG GTG AAG ATG GTG GCC TTG GGC ATC TTT GGC AAA AAG TGT TAC 491
128 F A V E M V V K M V A L G I F G K C Y 147
492 CTG GGA GAC ACT TGG AAC CCG CTT GAC TTT TTC ATC GTC ATC GCA GGC ATG CTG GAG TAC 551
148 L G D T W N R L D F F I V I A G M L E Y 167
552 TCG CTG GAC CTG CAG AAC GTC AGC TTC TCA GCT GTC AGG ACA GTC CGT GTG CTG CGA CCG 611
168 S L D L Q N V S F S A V R T V R V L R P 187

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FIG. 6A

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612 CTC AGG GCC ATT AAC CGG GTG CCC AGC ATG CGC ATC CTT GTC ACG TTG CTG CTG GAT ACG 671
188 L R A I N R V P S M R I L V T L L L D T 207
672 CTG CCC ATG CTG GGC AAC GTC CTG CTG CTC TGC TTC TTC GTC TTC ATC TTC GGC ATC 731
208 L P M L G N V L L L C F F V F I F G I 227
732 GTC GGC GTC CAG CTG TGG GCA GGG CTG CTT CGG AAC CGA TGC TTC CTA CCT GAG AAT TTC 791
228 V G V Q L W A G L L R N R C F L P E N F 247
792 AGC CTC CCC CTG AGC GTG GAC CTG GAG CGC TAT TAC CAG ACA GAG AAC GAG GAT GAG AGC 851
248 S L P L S V D L E R Y Y Q T E N E D E S 267
852 CCC TTC ATC TGC TCC CAG CCA CGC GAG AAC GGC ATG CGG TCC TGC AGA AGC GTG CCC ACG 911
268 P F I C S Q P R E N G M R S C R S V P T 287
912 CTG CGC GGC GAC GGC GGT GGC CCA CCT TGC GGT CTG GAC TAT GAG GCC TAC AAC AGC 971
288 L R G D G G G P C P C G L D Y E A Y N S 307
972 TCC AGC AAC ACC ACC TGT GTC AAC TGG AAC CAG TAC TAC ACC AAC TGC TCA GCG GGG GAG 1031
308 S S N T T C V N W N Q Y Y Y T N C S A G E 327
1032 CAC AAC CCC TTC AAG GGC GCC ATC AAC TTT GAC AAC ATT GGC TAT GCC TGG ATC GCC ATC 1091
328 H N P F K G A I N F D N I G Y A W I A I 347
1092 TTC CAG GTC ATC ACG CTG GAG GGC TGG GTC GAC ATC ATG TAC TTT GTG ATG GAT GCT CAT 1151
348 F Q V I T L E G W V D I M Y F V M D A H 367
1152 TCC TTC TAC AAT TTC ATC TAC TTC ATC CTC ATC ATC GTG GGC TCC TTC TTC ATG ATC 1211
368 S F Y N F I Y F I L L I I V G S F F M I 387

FIG. 6B

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1212	AAC	CTG	TGC	CTG	GTG	GTG	ATT	GCC	ACG	CAG	TTC	TCA	GAG	ACC	AAG	CAG	CGG	GAA	AGC	CAG	1271
388	N	L	C	L	V	V	I	A	T	Q	F	S	E	T	K	Q	R	E	S	Q	407
1272	CTG	ATG	CGG	GAG	CAG	CGT	GTG	CGG	TTC	CTG	TCC	AAC	GCC	AGC	ACC	CTG	GCT	AGC	TTC	TCT	1331
408	L	M	R	E	Q	R	V	R	F	L	S	N	A	S	T	L	A	S	F	S	427
1332	GAG	CCC	GGC	AGC	TGC	TAT	GAG	GAG	CTG	CTC	AAG	TAC	CTG	GTG	TAC	ATC	CTT	CGT	AAG	GCA	1391
428	E	P	G	S	C	Y	E	E	L	L	K	Y	L	V	Y	I	L	R	K	A	447
1392	GCC	CGC	AGG	CTG	GCT	CAG	GTC	TCT	CGG	GCA	GCA	GGT	GTG	CGG	GTT	GGG	CGT	CTC	AGC	AGC	1451
448	A	R	R	L	A	Q	V	S	R	A	A	G	V	R	V	G	L	L	S	S	467
1452	CCA	GCA	CCC	CTC	GGG	GGC	CAG	GAG	ACC	CAG	CCC	AGC	AGC	AGC	TGC	TCT	CGC	TCC	CAC	CGC	1511
468	P	A	P	L	G	G	Q	E	T	Q	P	S	S	S	C	S	R	S	H	R	487
1512	CGC	CTA	TCC	GTC	CAC	CAC	CTG	GTG	CAC	CAC	CAC	CAC	CAT	CAC	CAC	CAC	CAC	TAC	CAC	CTG	1571
488	R	L	S	V	H	H	L	V	H	H	H	H	H	H	H	H	H	Y	H	L	507
1572	GGC	AAT	GGG	ACG	CTC	AGG	GCC	CCC	CGG	GCC	AGC	CCG	GAG	ATC	CAG	GAC	AGG	GAT	GCC	AAT	1631
508	G	N	G	T	L	R	A	P	R	A	S	P	E	I	Q	D	R	D	A	N	527
1632	GGG	TCC	CGC	AGG	CTC	ATG	CTG	CCA	CCA	CCC	TCC	ACG	CCT	GCC	CTC	TCC	GGG	GCC	CCC	CCT	1691
528	G	S	R	R	L	M	L	P	P	P	S	T	P	A	L	S	G	A	P	P	547
1692	GGT	GGC	GCA	GAG	TCT	GTG	CAC	AGC	TTC	TAC	CAT	GCC	GAC	TGC	CAC	TTA	GAG	CCA	GTC	CGC	1751
548	G	G	A	E	S	V	H	S	F	Y	H	A	D	C	H	L	E	P	V	R	567
1752	TGC	CAG	GGC	CCC	CCT	CCC	AGG	TCC	CCA	TCT	GAG	GCA	TCC	GGC	AGG	ACT	GTG	GGC	AGC	GGG	1811
568	C	Q	A	P	P	P	R	S	P	S	E	A	S	G	R	T	V	G	S	G	587

FIG. 6C

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1812 AAG GTG TAT CCC ACC GTG CAC ACC AGC CCT CCA CCG GAG ACG CTG AAG GAG AAG GCA CTA 1871
588 K V Y P T V H T S P P P E T L K E K A L 607
1872 GTA GAG GTG GCT GCC AGC TCT GGG CCC CCA ACC CTC ACC AGC CTC AAC ATC CCA CCC GGG 1931
608 V E V A A S S G P P T L T S L N I P P G 627
1932 CCC TAC AGC TCC ATG CAC AAG CTG CTG GAG ACA CAG AGT ACA GGT GCC TGC CAA AGC TCT 1991
628 P Y S S M H K L L E T Q S T G A C Q S S 647
1992 TGC AAG ATC TCC AGC CCT TGC TCG AAA GCA GAC AGT GGA GCC TGT GGT CCA GAC AGC TGC 2051
648 C K I S S P C L K A D S G A C G P D S C 667
2052 CCC TAC TGT GCC CGG GCC GCG GCA GGG GAG GTG GAG CTC GCC GAC CGT GAA ATG CCT GAC 2111
668 P Y C A R A G A G E V E L A D R E M P D 687
2112 TCA GAC AGC GAG GCA GTT TAT GAG TTC ACA CAG GAT GCC CAG CAC AGC GAC CTC CGG GAC 2171
688 S D S E A V Y E F T Q D A Q H S D L R D 707
2172 CCC CAC AGC CGG CAA CGG AGC CTG GGC CCA GAT GCA GAG CCC AGC TCT GTG CTG GCC 2231
708 P H S R R Q R S L G P D A E P S S V L A 727
2232 TTC TGG AGG CTA ATC TGT GAC ACC TTC CGA AAG ATT GTG GAC AGC AAG TAC TTT GGC CGG 2291
728 F W R L I C D T F R K I V D S K Y F G R 747
2292 GGA ATC ATG ATC GCC ATC CTG GTC AAC ACA CTC AGC ATG GGC ATC GAA TAC CAC GAG CAG 2351
748 G I M I A I L V N T L S M G I E Y H E Q 767
2352 CCC GAG GAG CTT ACC AAC GCC CTA GAA ATC AGC AAC ATC GTC TTC ACC AGC CTC TTT GCC 2411
768 P E E L T N A L E I S N I V F T S L F A 787

FIG. 6D

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2412 CTG GAG ATG CTG CTG AAG CTG CTT GTG TAT GGT CCC TTT GGC TAC ATC AAG AAT CCC TAC 2471
788 L E M L L K L L V Y G P F G Y I K N P Y 807
2472 AAC ATC TTC GAT GGT GTC ATT GTG GTC ATC AGC GTG TGG GAG ATC GTG GGC CAG CAG GGG 2531
808 N I F D G V I V V I S V W E I V G Q Q G 827
2532 GGC GGC CTG TCG GTG CTG CGG ACC TTC CGC CTG ATG CGT GTG CTG AAG CTG GTG CGC TTC 2591
828 G G L S V L R T F R L M R V L K L V R F 847
2592 CTG CCG GCG CTG CAG CGG CAG CTG GTG GTG CTC ATG AAG ACC ATG GAC AAC GTG GCC ACC 2651
848 L P A L Q R Q L V V L M K T M D N V A T 867
2652 TTC TGC ATG CTG CTT ATG CTC TTC ATC TTC AGC ATC CTG GGC ATG CAT CTC TTC 2711
868 F C M L L M L F I F I S I L G M H L F 887
2712 GGC TGC AAG TTT GCC TCT GAG CGG GAT GGG GAC ACC CTG CCA GAC CGG AAG AAT TTT GAC 2771
888 G C K F A S E R D G D T L P D R K N F D 907
2772 TCC TTG CTC TGG GCC ATC GTC ACT GTC TTT CAG ATC CTG ACC CAG GAG GAC TGG AAC AAA 2831
908 S L L W A I V T V F Q I L T Q E D W N K 927
2832 GTC CTC TAC AAT GGT ATG GCC TCC ACG TCG TCC TGG GCG GCC CTT TAT TTC ATT GCC CTC 2891
928 V L Y N G M A S T S S W A A L Y F I A L 947
2892 ATG ACC TTC GGC AAC TAC GTG CTC TTC AAT TTG CTG GTC GCC ATT CTG GTG GAG GGC TTC 2951
948 M T F G N Y V L F N L L V A I L V E G F 967
2952 CAG GCG GAG GAA ATC AGC AAA CGG GAA GAT GCG AGT GGA CAG TTA AGC TGT ATT CAG CTG 3011
968 Q A E E I S K R E D A S G Q L S C I Q L 987

FIG. 6E

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3012	CCT	GTC	GAC	TCC	CAG	GGG	GGA	GAT	GCC	AAC	AAG	TCC	GAA	TCA	GAG	CCC	GAT	TTC	TTC	TCA	3071
988	P	V	D	S	Q	G	G	D	A	N	K	S	E	S	E	P	D	F	F	S	1007
3072	CCC	AGC	CTG	GAT	GGT	GAT	GGG	GAC	AGG	AAG	AAG	TGC	TTG	GCC	TTG	GTG	TCC	CTG	GGA	GAG	3131
1008	P	S	L	D	G	D	G	D	R	K	K	C	L	A	L	V	S	L	G	E	1027
3132	CAC	CCG	GAG	CTG	CGG	AAG	AGC	CTG	CTG	CCG	CCT	CTC	ATC	ATC	CAC	ACG	GCC	GCC	ACA	CCC	3191
1028	H	P	E	L	R	K	S	L	L	P	P	L	I	I	H	T	A	A	T	P	1047
3192	ATG	TCG	CTG	CCC	AAG	AGC	ACC	AGC	AGC	GGC	CTG	GGC	GAG	GCG	CTG	GGC	CCT	GCG	TCG	CGC	3251
1048	M	S	L	P	K	S	T	S	T	G	L	G	E	A	L	G	P	A	S	R	1067
3252	CGC	ACC	AGC	AGC	AGC	GGG	TCG	GCA	GAG	CCT	GGG	GGC	GCC	CAC	GAG	ATG	AAG	TCA	CCG	CCC	3311
1068	R	T	S	S	S	G	S	A	E	P	G	A	A	H	E	M	K	S	P	P	1087
3312	AGC	GCC	CGC	AGC	TCT	CCG	CAC	AGC	CCC	TGG	AGC	GCT	GCA	AGC	AGC	TGG	ACC	AGC	AGG	CGC	3371
1088	S	A	R	S	S	P	H	S	P	W	S	A	A	S	S	W	T	S	R	R	1107
3372	TCC	AGC	CGG	AAC	AGC	CTC	GGC	CGT	GCA	CCC	AGC	CTG	AAG	CGG	AGA	AGC	CCA	AGT	GGA	GAG	3431
1108	S	S	R	N	S	L	G	R	A	P	S	L	K	R	R	S	P	S	G	E	1127
3432	CGG	CGG	TCC	CTG	TTG	TCG	GGA	GAA	GGC	CAG	GAG	AGC	CAG	GAT	GAA	GAG	GAG	AGC	TCA	GAA	3491
1128	R	R	S	L	L	S	G	E	G	Q	E	S	Q	D	E	E	E	S	S	E	1147
3492	GAG	GAG	CGG	GCC	AGC	CCT	GGC	GGC	AGT	GAC	CAT	CGC	CAC	AGG	GGG	TCC	CTG	GAG	CGG	GAG	3551
1148	E	E	R	A	S	P	A	G	S	D	H	R	H	R	G	S	L	E	R	E	1167
3552	GCC	AAG	AGT	TCC	TTT	GAC	CTG	CCA	GAC	ACA	CTG	CAG	CTG	CCA	GGG	CTG	CAT	CGC	ACT	GCC	3611
1168	A	K	S	S	F	D	L	P	D	T	L	Q	V	P	G	L	H	R	T	A	1187

FIG. 6F

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3612 AGT GGC CGA GGG TCT GCT TCT GAG CAC CAG GAC TGC AAT CGC AAG TCG GCT TCA GGG CGC 3671
1188 S G R G S A S E H Q D C N G K S A S G R 1207
3672 CTG GCC CGG GCC CTG CGG CCT GAT GAT GAT GGG GAT GAC GCC GAT GAC GAG 3731
1208 L A R A L R P D D P P L D G D A D D E 1227
3732 GGC AAC CTG AGC AAA GGG GAA CGG GTC CGC GCG TGG ATC CGA GCC CGA CTC CCT GCC TGC 3791
1228 G N L S K G E R V R A W I R A R L P A C 1247
3792 TAC CTC GAG CGA GAC TCC TGG TCA CCC TAC ATC TTC CCT CCT CAG TCC AGG TTC CGC CTC 3851
1248 Y L E R D S W S A Y I F P P Q S R F R L 1267
3852 CTG TGT CAC CGG ATC ATC ACC CAC AAG ATG TTC GAC CAG GTG GTC CTT GTC ATC ATC TTC 3911
1268 L C H R I I T H K M F D H V V L V I I F 1287
3912 CTT AAC TGC ATC ACC ATC GCC ATG GAG CGC CCC AAA ATT GAC CCC CAC AGC GCT GAA CGC 3971
1288 L N C I T I A M E R P K I D P H S A E R 1307
3972 ATC TTC CTG ACC CTC TCC AAT TAC ATC TTC ACC GCA GTC TTT CTG GCT GAA ATG ACA GTG 4031
1308 I F L T L S N Y I F T A V F L A E M T V 1327
4032 AAG GTG GCA CTG GGC TGG TGC TTC GGG GAG CAG GCG TAC CTG CGG AGC AGT TGG AAC 4091
1328 K V V A L G W C F G E Q A Y L R S S W N 1347
4092 GTG CTG GAC GGG CTG TTG GTG CTC ATC TCC GTC ATC GAC ATT CTG GTG TCC ATG GTC TCT 4151
1348 V L D G L L V L I S V I D I L V S M V S 1367
4152 GAC AGC ACC AAG ATC CTG GGC ATG CTG AGG GTG CTG CGG CTG CGG ACC CTG CGC 4211
1368 D S G T K I L G M L R V L R L L R T L R 1387

FIG. 6G

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4212	CCG	CTC	AGG	GTG	ATC	AGC	CGG	GCG	CAG	GGG	CTG	AAG	CTG	GTG	GTG	GAG	ACG	CTG	ATG	TCC	4271
1388	P	L	R	V	I	S	R	A	Q	G	L	K	L	V	V	E	T	L	M	S	1407
4272	TCA	CTG	AAA	CCC	ATC	GGC	AAC	ATT	GTA	GTC	ATC	TGC	TGT	GCC	TTC	TTC	ATC	ATT	TTC	GGC	4331
1408	S	L	K	P	I	G	N	I	V	V	I	C	C	A	F	F	I	I	F	G	1427
4332	ATC	TTG	GGG	GTG	CAG	CTC	TTC	AAA	GGG	AAG	TTT	TTC	GTG	TGC	CAG	GGC	GAG	GAT	ACC	AGG	4391
1428	I	L	G	V	Q	L	F	K	G	K	F	F	V	C	Q	G	E	D	T	R	1447
4392	AAC	ATC	ACC	AAT	AAA	TCG	GAC	TGT	GCC	GAG	GCC	AGT	TAC	CGG	TGG	GTC	CGG	CAC	AAG	TAC	4451
1448	N	I	T	N	K	S	D	C	A	E	A	S	Y	R	W	V	R	M	K	Y	1467
4452	AAC	TTT	GAC	AAC	CTT	GGC	CAG	GCC	CTG	ATG	TCC	CTG	TTC	GTT	TTG	GCC	TCC	AAG	GAT	GGT	4511
1468	N	F	D	N	L	G	Q	A	L	M	S	L	F	V	L	A	S	K	D	G	1487
4512	TGG	GTG	GAC	ATC	ATG	TAC	GAT	GGG	CTG	GAT	GCT	GTG	GGC	GTG	GAC	CAG	CAG	CCC	ATC	ATG	4571
1488	W	V	D	I	M	Y	D	G	L	D	A	V	G	V	D	Q	Q	P	I	M	1507
4572	AAC	CAC	AAC	CCC	TGG	ATG	CTG	CTG	TAC	TTC	ATC	TCG	TTC	CTG	CTC	ATT	GTG	GCC	TTC	TTT	4631
1508	N	H	N	P	N	W	L	L	Y	F	I	S	F	L	L	I	V	A	F	F	1527
4632	GTC	CTG	AAC	ATG	TTT	GTG	GGT	GTG	GTG	GTG	GAG	AAC	TTC	CAC	AAG	TGT	AGG	CAG	CAC	CAG	4691
1528	V	L	N	M	F	V	G	V	V	V	E	N	F	H	K	C	R	Q	H	Q	1547
4692	GAG	GAA	GAG	GAG	GCC	CGG	CGG	CGG	GAG	GAG	AAG	CGC	CTA	CGA	AGA	CTG	GAG	AAA	AAG	AGA	4751
1548	E	E	E	A	R	R	R	E	E	K	R	L	L	R	R	L	E	K	K	R	1567
4752	AGG	AAA	GCC	CAG	TGC	AAA	CCT	TAC	TAC	TCC	GAC	TAC	TCC	CGC	TTC	CGG	CTC	CTC	GTC	CAC	4811
1568	R	K	A	Q	C	K	P	Y	Y	S	D	Y	S	R	F	R	L	L	V	H	1587

FIG. 6H

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4812	CAC	TTG	TGC	ACC	AGC	CAC	TAC	CTG	GAC	CTC	TTC	ATC	ACA	GGT	GTC	ATC	GGG	CTG	AAC	GTG	4871
1588	H	L	C	T	S	H	Y	L	D	L	F	I	T	G	V	I	G	L	N	V	1607
4872	GTC	ACC	ATG	GCC	ATG	GAG	CAC	TAC	CAG	CAG	CCC	CAG	ATT	CTG	GAT	GAG	GCT	CTG	AAG	ATC	4931
1608	V	T	M	A	M	E	H	Y	Q	Q	P	Q	I	L	D	E	A	L	K	I	1627
4932	TGC	AAC	TAC	ATC	TTC	ACT	GTC	ATC	TTT	GTC	TTG	GAG	TCA	GTT	TTC	AAA	CTT	GTG	GCC	TTT	4991
1628	C	N	Y	I	F	T	V	I	F	V	L	E	S	V	F	K	L	V	A	F	1647
4992	GGT	TTC	CGT	CGG	TTC	TTC	CAG	GAC	AGG	TGG	AAC	CAG	CTG	GAC	CTG	GCC	ATT	GTG	CTG	CTG	5051
1648	G	F	R	R	F	F	Q	D	R	W	N	Q	L	D	L	A	I	V	L	L	1667
5052	TCC	ATC	ATG	GGC	ATC	ACG	CTG	GAG	GAA	ATC	GAG	GTC	AAC	GCC	TCG	CTG	CCC	ATC	AAC	CCC	5111
1668	S	I	M	G	I	T	L	E	E	I	E	V	N	A	S	L	P	I	N	P	1687
5112	ACC	ATC	ATC	CGC	ATC	ATG	AGG	GTG	CTG	CGC	ATT	GCC	CGA	GTG	CTG	AAG	CTG	CTG	AAG	ATG	5171
1688	T	I	I	R	I	M	R	V	L	R	I	A	R	V	L	K	L	L	K	M	1707
5172	GCT	GTG	GGC	ATG	CGG	GCG	CTG	CTG	GAC	ACG	GTG	ATG	CAG	GCC	CTG	CCC	CAG	GTG	GGG	AAC	5231
1708	A	V	G	M	R	A	L	L	D	T	V	M	Q	A	L	P	Q	V	G	N	1727
5232	CTG	GGA	CTT	CTC	TTC	ATG	TTG	TTG	TTT	TTC	ATC	TTT	GCA	GCT	CTG	GGC	GTG	GAG	CTC	TTT	5291
1728	L	G	L	L	F	M	L	L	F	F	I	F	A	A	L	G	V	E	L	F	1747
5292	GGA	GAC	CTG	GAG	TGT	GAC	GAG	ACA	CAC	CCC	TGT	GAG	GGC	CTG	GGC	CGT	CAT	GCC	ACC	TTT	5351
1748	G	D	L	E	C	D	E	T	H	P	C	E	G	L	G	R	H	A	T	F	1767
5352	CGG	AAC	TTT	GGC	ATG	GCC	TTC	CTA	ACC	CTC	TTC	CGA	GTC	TCC	ACA	GGT	GAC	AAT	TGG	AAT	5411
1768	R	N	F	G	M	A	F	L	T	L	F	R	V	S	T	G	D	N	W	N	1787

FIG. 6I

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5412	GGC	ATT	ATG	AAG	GAC	ACC	CTC	CGG	GAC	TGT	GAC	CAG	GAG	TCC	ACC	TGC	TAC	AAC	ACG	GTC	5471
1788	G	I	M	K	D	T	L	R	D	C	D	Q	E	S	T	C	Y	F	T	V	1807
5472	ATC	TCG	CCT	ATC	TAC	TTT	GTG	TCC	TTC	GTG	CTG	ACG	GCC	CAG	TTC	GTG	CTA	GTC	AAC	GTG	5531
1808	I	S	P	I	Y	F	V	S	F	V	L	T	A	Q	F	V	L	V	N	V	1827
5532	GTG	ATC	GCC	GTG	CTG	ATG	AAG	CAC	CTG	GAG	GAG	AGC	AAC	AAG	GAG	GCC	AAG	GAG	GAG	GCC	5591
1828	V	I	A	V	L	M	K	H	L	E	E	S	N	K	E	A	K	E	E	A	1847
5592	GAG	CTA	GAG	GCT	GAG	CTG	GAG	CTG	GAG	ATG	AAG	ACC	CTC	AGC	CCC	CAG	CCC	CAC	TCG	CCA	5651
1848	E	L	E	A	E	L	E	L	E	M	K	T	L	S	P	Q	P	H	S	P	1867
5652	CTG	GGC	AGC	CCC	TTC	CTC	TGG	CCT	GGG	GTC	GAG	GGC	CCC	GAC	AGC	CCC	GAC	AGC	CCC	AAG	5711
1868	L	G	S	P	F	L	W	P	G	V	E	G	P	D	S	P	D	S	P	K	1887
5712	CCT	GGG	GCT	CTG	CAC	CCA	GCG	GCC	CAC	GCG	AGA	TCA	GCC	TCC	CAC	TTT	TCC	CTG	GAG	CAC	5771
1888	P	G	A	L	H	P	A	A	H	A	R	S	A	S	H	F	S	L	E	H	1907
5772	CCC	ACG	ATG	CAG	CCC	CAC	CCC	ACG	GAG	CTG	CCA	GGA	CCA	GAC	TTA	CTG	ACT	GTG	CGG	AAG	5831
1908	P	T	M	Q	P	H	P	T	E	L	P	G	P	D	L	L	T	V	R	K	1927
5832	TCT	GGG	GTC	AGC	CGA	ACG	CAC	TCT	CTG	CCC	AAT	GAC	AGC	TAC	ATG	TGT	CGG	CAT	GGG	AGC	5891
1928	S	G	V	S	R	T	H	S	L	P	N	D	S	Y	M	C	R	H	G	S	1947
5892	ACT	GCC	GAG	GGG	CCC	CTG	GGA	CAC	AGG	GGC	TGG	GGG	CTC	CCC	AAA	GCT	CAG	TCA	GGC	TCC	5951
1948	T	A	E	G	P	L	G	H	R	G	W	G	L	P	K	A	Q	S	G	S	1967
5952	GTC	TTG	TCC	GTT	CAC	TCC	CAG	CCA	GCA	GAT	ACC	AGC	TAC	ATC	CTG	CAG	CTT	CCC	AAA	GAT	6011
1968	V	L	S	V	H	S	Q	P	A	D	T	S	Y	I	L	Q	L	P	K	D	1987

FIG. 6J

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6012 GCA CCT CAT CTG CTC CAG CCC CAC AGC AGC GCC CCA ACC TGG GGC ACC ATC CCC AAA CTG CCC 6071
1988 A P H L L Q P H S A P T W G T I P K L P 2007
6072 CCA CCA GGA CGC TCC CCT TTG GCT CAG AGG CCA CTC AGG CGC CAG GCA GCA ATA AGG ACT 6131
2008 P P G R S P L A Q R P L R R Q A A I R T 2027
6132 GAC TCC TTG GAC GTT CAG GGT CTG GGC AGC CGG GAA GAC CTG CTG GCA GAG GTG AGT GGG 6191
2028 D S L D V Q G L G S R E D L L A E V S G 2047
6192 CCC TCC CCG CCC CTG GCC CGG GCC TAC TCT TTC TGG GGC CAG TCA AGT ACC CAG GCA CAG 6251
2048 P S P P L A R A Y S F W G Q S S T Q A Q 2067
6252 CAG CAC TCC CGC AGC CAC AGC AAG ATC TCC AAG CAC ATG ACC CCG CCA GCC CCT TGC CCA 6311
2068 Q H S R S H S K I S K H M T P P A P C P 2087
6312 GGC CCA GAA CCC AAC TGG GGC AAG GGC CCT CCA GAG ACC AGA AGC AGC TTA GAG TTG GAC 6371
2088 G P E P N W G K G P P E T R S S L E L D 2107
6372 ACG GAG CTG AGC TGG ATT TCA GGA GAC CTC CTG CCC CCT GGC GGC CAG GAG GAG CCC CCA 6431
2108 T E L S W I S G D L L P P G G Q E E P P 2127
6432 TCC CCA CGG GAC CTG AAG AAG TGC TAC AGC GTG GAG GCC CAG AGC TGC CAG CGC CGG CCT 6491
2128 S P R D L K K C Y S V E A Q S C Q R R P 2147
6492 TCC TGG CTG GAT GAG CAG AGG AGA CAC TCT ATC GCC GTC AGC TGC CTG GAC AGC GGC 6551
2148 T S W L D E Q R R H S I A V S C L D S G 2167
6552 TCC CAA CCC CAC CTG GGC ACA GAC CCC TCT AAC CTT GGC CAG CCT CTT GGG GGG CCT 6611
2168 S Q P H L G T D P S N L G G Q P L G G P 2187

FIG. 6K

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6612 GGG AGC CGG CCC AAG AAA AAA CTC AGC CCG CCT AGT ATC ACC ATA GAC CCC CCC GAG AGC 6671
2188 G S R P K K K L S P P S I T I D P P E S 2207
6672 CAA GGT CCT CGG ACC CCG CCC AGC CCT GGT ATC TGC CTC CGG AGG AGG GCT CCG TCC AGC 6731
2208 Q G P R T P P S P G I C L R R A P S S 2227
6732 GAC TCC AAG GAT CCC TTG GCC TCT GGC CCC CCT GAC AGC ATG GCT GCC TCG CCC TCC CCA 6791
2228 D S K D P L A S G P P D S M A A S P S P 2247
6792 AAG AAA GAT GTG CTG AGT CTC TCC GGT TTA TCC TCT GAC CCA GCA GAC CTG GAC CCC TGA 6851
2248 K K D V L S L S G L S S D P A D L D P - 2267
6852 gtcctgccccactttccactcacctttctccactgggtgc 6892

FIG. 6L

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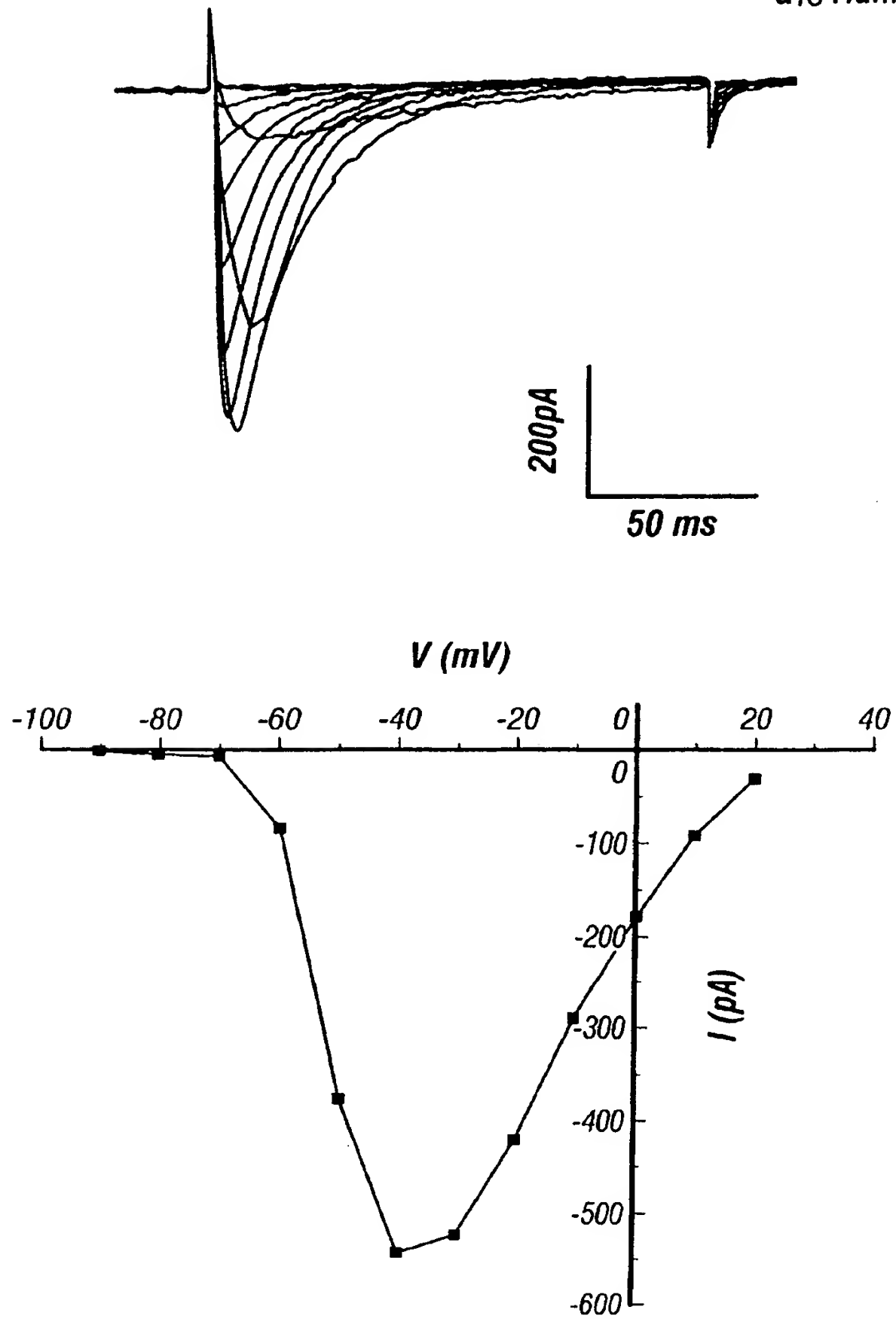
 α_{1G} Human 2mM Ca^{2+} 

FIG. 7

COMPARISON OF P-REGIONS

I		II		III		IV		(SEQ ID NOS:38-43)				
LAASE	E	GWVYV	QIITQ	E	GMTDF	ETLSF	K	GWNVI	RCLTG	E	DWNDI	NIC-1 (C11D2.6)
LAASQ	E	GWVYV	QIITQ	E	GMTDV	ETLSY	K	GWNVV	RSVTG	E	DWNDI	NIC-2 (C27F2.3)
EASSQ	E	GWVFL	QILTQ	E	GWVDV	EVLSL	K	GWVEV	RIVTG	E	DWNKI	Rat -NIC
QCITM	E	GWTDV	QILTG	E	DWNSV	TVSTF	E	GWPEL	RCATG	E	AWQDI	L-Type Ca Channel
QVITL	E	GWVDI	QILTQ	E	DWNKV	VLASK	D	GWVDI	RVSTG	D	NWNGI	T-Type Ca Channel
RLMTQ	D	FWENL	RVLCG	E	WIETM	QVATF	K	GWMDI	QITTS	A	GWDGL	Na Channels

FIG. 8